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(54) Title: CONTROLLED RELEASE OF ANTI-ARRHYTHMIC AGENTS

(57) **Abstract:** Methods for the simple, reliable application and local controlled release of selected anti-arrhythmia drugs from a hydrogel applied to or polymerized on the tissues of the heart or its vessels, especially in conjunction with cardiac bypass or other cardiac surgery, have been developed. The anti-arrhythmia drugs are incorporated along with an anti-inflammatory agent into hydrogels that biodegrade and adhere to the tissues to which the anti-arrhythmic drugs are to be delivered. The hydrogels may be formed *in vitro* or *in vivo*. In a preferred embodiment, the drugs are effective to lengthen atrial effective refractory period and minimize the inflammatory response. A particularly preferred drug is amiodarone and dexamethasone.